

START

Baseball Projectile

Mini-Launcher Projectile

Measurements Lab
Launch Speed for each
 β and λ combination

Mini Launcher
Calculate KE at
launch. Then
Calculate η

Launcher
Efficiency, η

Use Rubber's Lab
data to determine
material properties

Calculate PE as
function of λ

Use $\eta = 100\%$
until real
value is
available

Full Size Launcher Projectile
Calculate range and flight time
for a variety of launch speeds

Repeat for three
launch angles

Overlay Graph:
Speed vs. Range

Overlay Graph:
Flight Time vs. Speed

Graph:
Lateral shift vs. flight
time

Flight Time

Full Size Launcher
Calculate launch
speed from PE and η

Graph:
Full Size Launcher
Speed vs. Stretch Ratio

Task

Data Transfer

Deliverable